

Air Education and Training Command

Develop America's Airmen Today ... for Tomorrow

Tricks of the Trade

How To Prepare For,

Survive And

Prosper

During AWC



U.S. AIR FORCE

**DR. GRANT T.
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Integrity - Service - Excellence



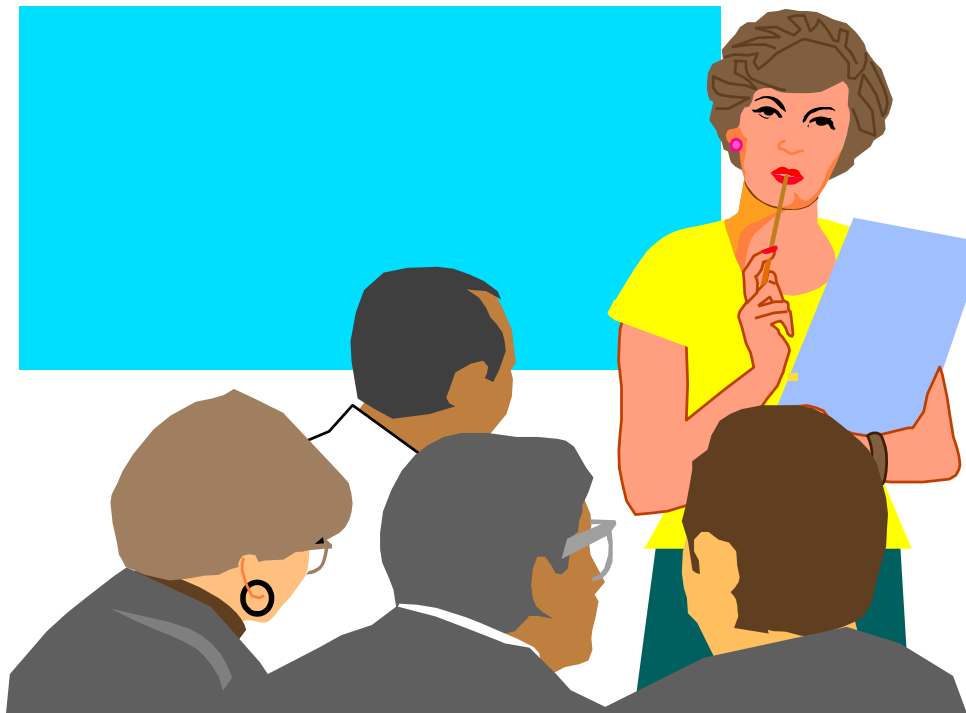
Thought For The Day



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“The best audience is intelligent, well-educated, and a little drunk.”



Alben W. Barkley, Vice President, 1949 - 1952



New AWC Motto



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We've Upped Our Standards

Up Yours!



How This Developed



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- **These are some of my techniques for coping with the demands of academia**
- **They are not the only ways and may not be the best ways for you**
- **But you need to find and practice ways of becoming academically efficient . . .and effective.**



This Is Important!



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- **Start now and practice a system so it becomes automatic**
- **Want you to be effective in your thinking and the communication of your ideas**
- **Poorly communicated ideas are often taken as poor ideas**
- **We can't afford either**



Educational General Order #1

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- **Always carry something to write on and something to write with**
- **Electronic or old fashioned is less important than taking notes**
- **Ideas may come at strange times and places and you need to capture them**
- **Write it down!**



Getting Started



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- **You are all capable people or you wouldn't be here**
- **But you've been out of a school environment for a long time**
- **These are short cuts and tricks of the trade to cope efficiently with reading, writing and studying**
- **Rule #1--Always begin with a question**



The Importance Of Questions

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- **You can't find an answer without a question**
- **All data is equal until you discriminate among it by asking a question**
- **Training = how—answers**
- **Education = why—questions**
- **Questions are the key to learning**



The Importance Of Questions

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- **Question everything, every reading, every one**
- **Questions help you to define and refine purpose and mission**
- **You can't learn to ask good questions unless you practice the skill and art of doing so**
- **Questions precede answers!**



Leadership And Questions

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- **You have spent much of your career providing answers for other people's questions**
- **As a senior leader, you have a greater responsibility for questions**
- **If you don't ensure that the right questions are asked, the nation may not get the answers it needs**



How To Formulate Questions



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- **Which level is most important?**
- **Informational**
 - **Who**
 - **Where**
 - **When**
 - **What**
- **Analytical**
 - **How**
 - **Why**
- **Prioritize within each category**
- **Focus on most important elements**



How To Formulate Questions



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- **Then explore**
 - **A. Connections**
 - **B. Precedents**
 - **C. Implications**
 - **D. Causation**
- **Don't accept single factor analysis**
- **Make a case for the alternative**
 - **Stand things on their head**
 - **Reverse cause and effect**



Learning to Ask Good Questions

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- **On a 3x5 card, ask three questions for each seminar IP**
- **These can be questions you asked of the readings before you read the material**
- **They can be questions raised by the assignment**
- **They can be questions about differing perspectives in the readings**
- **They can be things not addressed in the IP but related to it**



Learning to Ask Good Questions

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- **Think about different types of questions and their utility**
- **Practice asking different kinds of questions**
- **Jot down what others ask and the questions you think were the best ones asked**
- **Get to the heart of the matter—the essential question on which all others depend**
- **Try and answer your questions and test the range of responses that are possible**



Basic Kinds of Questions



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- **Memory Level Questions—**
 - Deal with information and basic facts
 - Involve naming, identifying, defining, designating
 - Who, What Where, When?
- **Evaluative Questions—**
 - Deal with matters of judgment, value and choice
 - Involve valuing, judging, defending, justifying
 - What do you think about ... ?



Basic Kinds of Questions



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- **Convergent Questions—**
 - Represent analysis and integration of information
 - Involve explaining, stating relationships, comparing and contrasting
 - Ask how, why, in what ways ...?
- **Divergent thinking—**
 - Generation of new ideas, perspectives, direction
 - Involve predicting, hypothesizing, inferring, reconstructing
 - Imagine; suppose; how might ...; if..., then...



Other Kinds of Questions



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- **Essential Elaborating**
- **Irreverent Irrelevant**
- **Hypothetical Unanswerable**
- **Provocative Strategic**
- **Telling Probing**
- **Inventive Planning**
- **Why bother? So what?**



Asking “Why?”



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- **Always ask “why?”**
- **Become a four year old**
- **Taichi Ohno--ask “why?” five times**
 - **Form the habit of skepticism**
 - **Achieve a different level of understanding**
 - **Make significant breakthroughs**
- **Answers to the question include**
 - **Because**
 - **Why not?**



Rules 2-5 for Study and Research



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- **2. Never write on two sides of a note card or piece of paper**
- **3. Always THINK about the answers to your questions before you go looking for them**
- **4. Write it down! Your stray thoughts and insights may be the most important elements.**
- **5. Keep your thoughts, papers and references organized, for each distinct project--if only in the same file, pile or corner of the room!**



How To Preview A Book



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Know what you have to confront

Title

Author

Publisher

Date of publication

Subtitle

What spin, point of view?



How To Preview A Book

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- **What is the purpose of reading book?**
- **Am I to be tested on it (how)?**
- **What do I need to get out of it?**
 - **(How much should I put into it?)**
 - **Facts / theories / methods / other**



How To Preview A Book



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- **Use book's organization to help you read**
- **Table of contents**
 - **Chapter titles - a road map**
- **Exec. Summary, preface, introduction**
 - **Why book written**
 - **How book organized**
- **Index**
 - **What does author spend time on**
 - **Where find particular info**



How To Preview A Book

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- **Basic review should answer:**
 - **What is book about**
 - **How is it presented**
- **Main idea, theme of work**
- **Why is it important to me?**
- **Why is it important to the assignment?**



How To Read A Book



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- **What is the question?**
- **Read the introduction and conclusion**
- **Skim material to be read looking for:**
 - **Chapter subdivisions**
 - **Bold face, *italics*, underlining**
 - **Lists, numbers**
 - **Summaries, conclusions**



How To Read A Book



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- **Read with a purpose**
- **Preview first**
- **Identify the logic**
- **Read differentially'**
- **Annotate as you read**
- **Pay attention to what confuses you**
- **Notice relation to other scholarship**
- **Write notes about it**
- **Reflect on and evaluate the argument**



How To Read A Book

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- **Learn how author writes**
- **Know where to look**
- **Practice to increase skills and ability**
 - **Best for social sciences, not literature**
- **Vary your reading speed**
- **Note how you react to your reading**
 - **Connect to material**
 - **Make presentation easier**



How To Read A Book

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- **Make negative case against the author's arguments and evidence**
- **You'll understand better if you:**
 - **Argue the opposite point of view**
 - **Find weaknesses and advantages in arguments**
- **Focus, don't forget purpose**



“Only Connect”



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- **How are things alike?**
- **How are they different?**
- **Precedents?**
- **Analogies?**
- **Consequences?**
- **Limitations?**
- **What if...?**
- **Why not?**
- **How best...?**
- **Alternatives?**
- **. . . ?**



Observation



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**“Much learning doth
make thee mad”**

ACTS,

XXVI, 24



How To Study



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- **Know what you are to accomplish**
 - **What are main questions, tasks?**
- **Organize to do it -- focus!**
- **Plan time**
 - **Work in 30, 60 or 90 minute segments**
 - **Gradually lengthen time to 3 hours**



How To Study

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- **Plan your course of study**
 - **Beginning, middle , end**
 - **Preview -- checkpoints**
 - **Practice different paces**
 - **Review what you have done**
 - **Is this accomplishing the task?**
- **Take breaks -- reward yourself**



Systems For Notes



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- **SYMBOL SETS:**

- **USE**  **FOR MAIN ARGUMENTS**

- **USE**  **FOR SUB-POINTS**

- **USE**  **FOR BOX FACTS**  **DATES, PEOPLE, EVENTS**

- **USE**  **FOR CIRCLED KEY TERMS, IDEAS**



Systems For Notes



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**KEY CONCEPTS
ARGUMENTS**

MAJOR

DEFINITIONS

EVIDENCE

ASSUMPTIONS

SUMMARY

METHODOLOGY

CONCLUSIONS



Systems For Notes

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Take notes as reminders

Take notes on notes for essence

Look for linkage, connections

Focus on what you *don't* know

Use all time available for efficiency

Waiting for spouse or kids, driving to AWC, etc.

What questions remain after reading?

After studying?

Answer them!!



Using Notes For Tests

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Study with others after preparing yourself

Focus on what you don't know--not what you do know

Leave time to unwind before test



How To Take A Test (Essay)



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- **Read entire test and instructions - - 3 times**
- **Think!**
- **Define question**
- **State why it is important**
- **Tell reader what you will do, and how you will do it**



How To Take A Test (Essay)

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- **Organize answers into components**
 - Outline response (argument, points)
 - List evidence (rule of three)
- **Plan time, establish checkpoints**
- **Accomplish mission -- execute!**
- **End = 2 sentence summary and conclusion**
- **Check -- do beginning and end match?**



How To Take A Test (Essay)

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**Don't panic if you learn
something on the exam ---**

Say so !

**Show what you learned in taking
exam**



How To Do Research And Write A Paper



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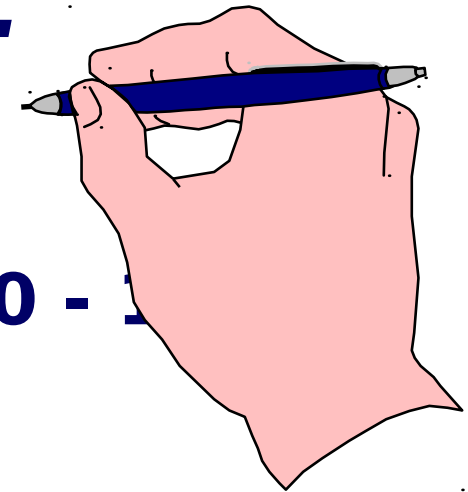


- **What you like least**
- **The military tends to be an oral culture**
- **Power Point presents the outline**
- **Often doesn't provide the logic that underlies the selected data**
- **Writing is required because it makes you THINK and defend your views in detail**
- **It is an instrumental goal**
- **What you learn in the process of doing it is as important as the final product**



“Writing is easy. All you do is stare at a blank sheet of paper until drops of blood form on your forehead.”

Gene Fowler (1890 - 1932)





Research



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- **Asking good questions**
- **Focusing on a particular problem**
- **Formulating an hypothesis**
- **Leads to a thesis**
- **Finding the facts**
- **THINKING about all of this**
- **Analyzing the components**
- **Synthesizing a new interpretation**



Research and Plagiarism



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- **“If you take from one person, it is plagiarism, if you take from many, it is research!”**
- **WRONG!**
- **Plagiarism is using the words or ideas of another as if they are your own, without proper citation**
- **DON'T DO IT!**
- **Learn to paraphrase, don't cite every sentence**



Plagiarism



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- **Using words, ideas, data of another without citation--on an exam, a paper, any assignment--is lying, stealing and cheating**
- **It is a violation of the UCMJ and conduct unbecoming an officer**
- **It is grounds for dismissal**
- **If you have any doubts, ask your course instructor**



How To Write A Paper

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- **List all issues, points**
- **Cluster and arrange in logical order**
- **Get bibliography**
- **Begin research**
- **List main questions**
- **Read to answer these**
- **Take notes on your reactions**



How To Write A Paper

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Tell a STORY
In order to
Make a POINT
That will
Produce an OUTCOME



How To Write A Paper

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The story is your argument or thesis

The point to be made is the purpose of the amassing of evidence

The outcome is the conclusions or recommendations



What You Want to Avoid



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“Your manuscript is both good and original; but the part that is good is not original, and the part that is original is not good.”

Samuel Johnson



How To Write A Paper

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- **Write -- beginning , middle or end**
- **State conclusions**
- **Marshall evidence**
- **Finish all the way through**
- **Let it sit for a few days**
- **Revise and polish**
- **Fine art of writing is rewriting**



How To Write A Paper

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- **Read it aloud**
- **Intelligent layman test**
- **Let your spouse review it**
- **Revise and rewrite**
- **Turn it in**
- **Move on**



PARTING SHOT



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**“Unprovided with original learning,
uninformed in the habits of
thinking, unskilled in the arts of
composition, I resolved to
write a book.”**

**Edward Gibbon, author
*Decline and Fall of the Roman
Empire***



So What?--Why Is AWC Important?

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War is first

- **Sought or avoided**
- **Planned and fought**
- **Won or lost**

In the minds of human beings



So What?--Why Is AWC Important?

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**“Terrain doesn’t fight wars.
Machines don’t fight war. People
fight wars. It’s in the minds of
men that war must be fought.”**

USAF Col John Boyd



Remember . . .



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- **Learning to think quickly & well is more important than being taught what to think**
- **Your mind is a force multiplier and your best weapon**
- **How you think and how well you perform because of that makes all the difference**



THE BOTTOM LINE



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- **Imagine the US fighting WW II without**
 - **Carrier aviation**
 - **Amphibious landings**
 - **Strategic bombing**
 - **Combined arms**
- **All were developed in the 1920s and 1930s**
- **What happens in war is often the result of peacetime military thinking and preparedness**



You Will Be Called Upon Again To Defend The Nation

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- **How well you will accomplish this future mission will, in part, be dependent on how well you have learned to think about issues studied at the AWC**
- **This is your duty assignment**
- **It is a vital part of preparedness to provide for the common defense**



Parting Shots



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- **“We thought we had the answers—It was the questions we had wrong.”**
U2
- **“Questions and questioning may be the most powerful technology of all.”**
Jamie McKenzie, *Beyond Technology*
- **Remember--some questions are better than others—rank times IQ is a constant.**

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